

Fam. MYTILIDÆ.

105. CRENELLA (MODIOLARIA) CUMINGIANA.

*Modiola cumingiana*, Dunker; Reeve, Conch. Icon. *Modiola*, pl. 9. f. 63 *a, b*.

Lake Macquarie, New South Wales (*Brazier*); also Moreton Bay and St. Vincent's Gulf.

106. PERNA CONFUSA, Angas, P. Z. S. 1871, Pl. I. f. 33.

Of a dark olive-brown colour, paler beneath; somewhat like *Modiola fortunei*, Dunker (from China), but more arcuate in form, of a different colour, and four times as large.

Lane-Cove River, Port Jackson.

Fam. ARCIDÆ.

107. LIMOPSIS BRAZIERI, Angas, P. Z. S. 1871, Pl. I. f. 34.

A small somewhat triangularly ovate species, finely concentrically ridged, and longitudinally crenate.

Dredged near the "Sow and Pigs," Port Jackson (*Brazier*).

Fam. RADULIDÆ.

108. RADULA (MANTELLUM) ORIENTALIS.

*Lima orientalis*, Ad. & Reeve, Voy. Samarang, pl. 11. f. 33 *a, b*.

A thin, delicate, semipellucid species, that must not be confounded with *R. angulata*, Sow.

Dredged near Watson's Bay (*Brazier*).

Class BRACHIOPODA.

Fam. TEREBRATULIDÆ.

109. TEREBRATELLA SANGUINEA, Lam. Anim. sans Vert. vii. p. 331.

A small yellowish species, handsomely ornamented with red markings.

Dredged near the rocks at Camp Cove, Port Jackson, in 7 fathoms (*Brazier*).

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February 7, 1871.

G. R. Waterhouse, Esq., V.P., in the Chair.

The following report on the additions to the Society's Menagerie during the month of January 1871 was read:—

The total number of registered additions to the Society's Menagerie during the month of January 1871 was 38, of which 17 were

by presentation, 15 by purchase, and 3 by exchange, 3 animals having been received only on deposit. The total number of departures during the same period, by death and removals, was 82.

The following were the most noticeable amongst the additions:—

1. A second living specimen of the Kakapo, or Ground-parrot of New Zealand (*Strigops habroptilus*), deposited January 24th by the captain of the vessel in which it was brought over, until it could be ascertained for whom it is really destined. I have reason to believe it is intended for this Society, but that the letter announcing its arrival has miscarried.

2. Two Derbyan Screamers (*Chauna derbiana*), imported from Santa Martha by one of the Royal Mail Steampacket Company's vessels, and received January 29th. These birds are, no doubt, from the same district as those formerly obtained for the Society by Mr. Greey (cf. P. Z. S. 1864, p. 74, and 1866, pp. 368, 369).

3. An Annulated Snake (*Leptodira annulata*) from Panama, purchased on the same day. This is a well-known Central-American species, but has not been previously exhibited alive in the Society's Menagerie.

4. A pair of the Splendid Grass-Parrakeet (*Euphema splendida*, Gould, B. of Austr. v. pl. 42). These are, I believe, the first examples of this beautiful Grass-Parrakeet ever brought alive to this country. We purchased them on January 30th from a London dealer, who states that they were received from a vessel coming from Adelaide. Mr. Gould (Handb. B. of Austr. ii. p. 79) has already spoken of the occurrence of this species in South Australia.

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Mr. E. Ward, F.Z.S., exhibited a skin of white variety of the Tiger (*Felis tigris*), obtained from an animal killed in the Mirzapore district, North-west Provinces of India.

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Mr. W. B. Tegetmeier, F.Z.S., exhibited a specimen of an Eel of a variety believed to be new to the fauna of Great Britain. It had been obtained from fresh water in the Scilly Islands, and had been referred by Dr. Günther to the Pimperneau of Cuvier (*Anguilla cuvieri*, Kaup).

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Mr. J. E. Harting, F.Z.S., exhibited a specimen of the Red-breasted Goose (*Anser ruficollis*, Pallas), recently shot at Maldon, on the Essex coast.

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Mr. H. E. Dresser exhibited specimens of the eggs of some European birds (hitherto unknown), and made the following remarks on them:—

“Amongst some eggs which I have lately received from Dr. Krüper and from Dr. Dybowsky, through M. Jules Verreaux, are some of considerable interest to collectors; and I have therefore

brought them here for inspection. They belong to the following species, viz. :—

*Micronisus brevipes.*

*Motacilla citreola.*

*Turdus fuscatus.*

*Reguloides superciliosus.*

*Ruticilla aurea.*

At the same time I beg leave to offer the following remarks respecting them.

“ MICRONISUS BREVIPES.

“ It is not long ago that the eggs of this Sparrow-hawk were first made known through Dr. Krüper, who procured them near Smyrna. The learned Doctor stated then that, as many of these Sparrow-hawks appeared to pass onwards into Europe, he felt sure that the species would be found to breed in Turkey or in Russia; and such proved to be the case, as Mr. W. Schluter of Halle subsequently procured both birds and eggs from Mr. Hodek, who took them near the Tiniok river, on the Servio-Bulgarian frontier, near Piconica in Servia. These eggs and birds were exhibited by Mr. Schluter, who also wrote an article respecting them in the ‘Zoologischer Garten,’ p. 375 (1869).

“ Since then Dr. Krüper, who has been collecting in Greece, has brought back several sittings of the eggs of this bird collected by him in that country, one of which, consisting of three eggs, I am enabled to exhibit. These eggs were taken by Dr. Krüper at Olympus, on the 12th of June last (1870); but I regret to say that I have not yet received from him any particulars as to the position of the nest, &c. In size they measure  $1\frac{1}{20}$  by  $1\frac{5}{20}$  inch, and in appearance are not unlike the eggs of the Hen-Harrier (*Cercus cyaneus*), but differ in having the pores deeper and further apart, and also in being of a more intense green colour in the inside.

“ I have also the pleasure to exhibit two skins of this rare Hawk, procured by Dr. Krüper in Greece—the one adult, and the other immature.

“ REGULOIDES SUPERCILIOSUS.

“ These eggs are of considerable interest, as the bird is an occasional straggler to Europe, and has also been procured in England. The Indian collectors, and Mr. A. O. Hume in particular, have long endeavoured in vain to procure them. I have also lately received a letter from Mr. Brooks of Etawah, in which he says that he hopes ere long to be in possession of genuine eggs of this rare bird; and, curiously enough, he appears to think that they may prove to be (as is actually the case) pure white and unspotted. Mr. A. O. Hume writes from Simla, under date of 24th June last (*vide Ibis*, 1870, p. 530), that the eggs of this bird were brought to him by a native collector from Chimbla with the parent bird. He writes respecting them as follows:—‘The ground-colour is a very delicate greenish white; and they are thinly speckled and spotted, chiefly

towards the large end, with a sort of burnt-umber brown, which in some spots is almost black, and in others excessively diluted and pale. The eggs have scarcely any gloss. They vary from  $\cdot 68$  to  $\cdot 7$  inch in length, and from  $\cdot 54$  to  $\cdot 55$  in breadth. They were procured on the 24th May, 1870. Of course, after all, these eggs may not be genuine; but there are *prima facie* strong grounds for believing them to be so.'

"From the above it will be seen that the eggs brought to Mr. Hume were spotted, and are therefore, I should say, not genuine.

"The eggs which I now exhibit are, as will be seen, pure white, unspotted, and rather glossy. In size they measure  $\frac{1\frac{2}{10}}$  inch in length, by  $\frac{9}{20}$  in width, and are almost pear-shaped, falling to a blunt point at the smaller end.

"These eggs were collected in Darasim, Dauria, by Dr. Dybowsky, and sent along with the birds, which were marked *Phyllopneuste coronata*; but on comparing them with specimens of *Reguloides superciliosus* from Siberia and India, I find them to belong to the latter species. I beg leave to offer for comparison one of the skins sent by Dr. Dybowsky and a specimen of *R. superciliosus* received from Mr. Brooks of Etawah, North-western India.

#### "TURDUS FUSCATUS.

"These four eggs form a complete sitting, and were also collected by Dr. Dybowsky at Darasim in Dauria, together with several others which I also have in my possession, but which do not differ materially from these. I do not know of any collection in England in which the eggs of this Thrush are to be found; and as it is an occasional straggler to Europe, I believe that collectors here present may be interested in examining these. As will be seen, they are in appearance not unlike some varieties of the eggs of the common Fieldfare (*Turdus pilaris*), but are rather smaller in size, increasing from  $\frac{1\frac{9}{10}}$  to  $1\frac{1}{10}$  inch in length, by from  $\frac{2\frac{9}{10}}$  to  $\frac{3\frac{1}{10}}$  in width, the ground-colour being bright blue, and the spots with which they are covered dark red.

#### "RUTICILLA AUROREA.

"One single specimen of the egg, together with about a dozen skins, of this bird were sent over by Dr. Dybowsky from Dauria. This specimen, which I now produce, measures  $\frac{3\frac{9}{10}}$  inch in length, by  $\frac{2\frac{1}{10}}$  in width, and in colour is very pale blue, minutely covered with pale red markings, which are collected round the larger end, forming an irregular zone.

#### "MOTACILLA CITREOLA.

"Amongst the eggs and skins sent over by Dr. Dybowsky from Darasim were several of this bird; and I have the pleasure of exhibiting six (a complete sitting) of the eggs. In size and colour they resemble the eggs of the Grey Wagtail (*Motacilla boarula*) so much that they can scarcely be distinguished from some eggs of this latter bird."



The following papers were read :—

1. Notes on some points in the Osteology of *Rhea americana* and *Rhea darwinii*. By ROBERT O. CUNNINGHAM, M.D., F.L.S., C.M.Z.S.

[Received January 2, 1871.]

(Plates VI. & VI<sup>a</sup>.)

Three distinct species of American Ostrich (the *Rhea americana*, *R. darwinii*, and *R. macrorhyncha*) are at the present time recognized by ornithologists. The first of these, which, it is almost unnecessary to state, was for a long period the only species of the genus known, appears to possess the widest geographical range, extending, if I am not mistaken, from Bolivia, Paraguay, and South Brazil, at least as far south as the Strait of Magellan\*, a space of upwards of thirty degrees. The second was first scientifically described by Mr. Gould, in the 'Proceedings' of this Society for 1837, from a specimen procured by Mr. Darwin at Port Desire, on the east coast of Patagonia, and probably extends from the Strait of Magellan to the Rio Negro, the boundary-line between Patagonia and the Argentine Republic; while for our knowledge of the third, the locality of which is, I believe, as yet undetermined, we are indebted to Mr. Sclater's finely illustrated article on the Struthious birds living in the Society's gardens, published in the fourth volume of the Society's 'Transactions.' In that valuable contribution to our knowledge of the Struthionidæ, its author has briefly pointed out several very well-marked points of distinction between the three species; but concerning these I need not occupy the time of the Society, as they are doubtless well-known to the generality of those who are now present.

I may therefore pass on to remark that, in assigning such an extensive range as I have above indicated to the *Rhea americana*, I am aware that my views on the subject are in conflict with the expressed opinions of a highly distinguished authority (Mr. Darwin), who fixes the southern boundary of this bird at a little to the south of the Rio Negro, observing that *R. darwinii* takes its place in Southern Patagonia. I can, however, positively assert that *R. americana* extends as far south as the Strait of Magellan, inhabiting the same tracts of country as the latter species; for in the course of my sojourn in the eastern portion of the Strait, I had opportunities of seeing a considerable number of recently killed specimens in the possession of the Patagonian Indians; and, although I do not recollect having observed any examples of *Rhea darwinii* in the flesh, I

\* That a species of *Rhea* occurs to the south of the Strait, in the large eastern island of Tierra del Fuego, the northern portion of which is almost identical in its climate and physical characters with those of Eastern Patagonia, may be regarded as certain; but whether it be referable to the *R. americana* or *R. darwinii* I am unable to state.

have picked up its characteristic white-tipped feathers in various localities in the plains\*.

I regret that I have almost nothing to add to our knowledge of the habits of *Rhea americana*, as it was but seldom that I noticed live examples, and then, owing to their speed of foot, only for a few minutes at a time. I can, however, corroborate the testimony of Mr. Darwin with regard to the facility with which the species takes to the water, one of the officers of the 'Nassau,' a very careful and trustworthy observer, having on one occasion observed several individuals on the south of St. Jago Bay (Strait of Magellan) escape from threatened danger by running into the sea. Further, I may add that, although indiscriminate in its feeding like other members of the tribe, it appears, in common with the Upland Goose (*Chloephaga magellanica*), to cherish a special predilection for the red berries of the *Empetrum rubrum*, a plant very abundant on the grassy plains.

Some months ago Mr. Sclater was good enough to place in my hands for examination and comparison two nearly perfect skeletons of *Rhea americana* and *R. darwini*; and I now venture to lay a few brief notes on the subject before the Society. Both specimens were those of females, that of *Rhea americana* having apparently belonged to an adult bird, while that of *R. darwini* bore unequivocal traces of immaturity. It is necessary, of course, to bear this fact in mind, as many of the differences observable are without doubt due to the different ages of the individuals, while a certain number are possibly only the result of individual variation, and others may probably with justice be regarded as marks of specific distinction.

Regarded *in toto*, the differences between the two skeletons are comparatively slight, though perhaps not more so than those which commonly obtain between closely allied species. In the following observations, I would premise that it is not my intention to attempt the very elaborate task of giving a full description of the osteology of the two species, as to do that in a complete and satisfactory manner would have necessitated the examination of a much larger number of specimens than I have had at my command, but to content myself with noting those points which appear to be of the most salient character.

*Cranium*.—Beginning with the cranium, I may remark that its general contour is very much the same in both species, though certain minute marks of distinction between the individual bones are recognizable on a careful inspection. Thus in the cranium of the specimen of *Rhea darwini* (in which nearly all the bones are still unanched) the vertical ridge on the supraoccipital is considerably more elevated than in *R. americana*, and the portion of the hori-

\* When Dr. Adolf Böcking, in his interesting "Monographie des Nandu oder südamerikanischen Strausses," in Wiegmann's Archiv for 1863 (for a reference to which I am indebted to Mr. Sclater), speaks of *R. americana* and *R. darwini* as climatic varieties comparable with those of *Perdix cinerea*, it is difficult to avoid the conclusion that he has never carefully examined specimens of the two birds; and his hypothesis is disproved by the fact of their occurring in the same district.

zontal plate of the ethmoid not covered by the frontals and nasals is of a different form, being an ellipse with pointed ends instead of a somewhat lozenge-shaped space as in the latter bird. In the former species there is also a much wider unossified space in the interorbital septum between the basi- and presphenoids than there is in the latter; but this is most probably a difference connected with age. On the other hand the lacuna in the ethmo-alisphenoid plate, immediately beneath the horizontal plate of the ethmoid, is nearly twice as large in *Rhea americana* as it is in *Rhea darwini*. The pterygoid processes of the basisphenoid are also curved more forwards in the former than in the latter. By far the most remarkable distinction in the bones of the skull of the two birds, however, is furnished by the lachrymal. In *Rhea americana* (Pl. VI. fig 1) the strong process directed backwards (anterior orbital process of authors) is much more elongated than in *R. darwini*, and the form of the descending process is also very different. In the former it curves downwards and backwards so as to produce a deeply excavated space on its posterior border, while in the latter (fig. 2) this process is met by another posterior bar of bone so as to connect the space into a large foramen. This will be more readily understood by a reference to the accompanying sketches, in which fig. 1 represents the bone in *R. americana*, and fig. 2 in *R. darwini*, the letter *a* in both bones indicating the surface of articulation with the cranium. Other minor differences in the bones of the head are probably due to age.

*Vertebræ.*—Except in point of size, the vertebræ of the two species differ but little from one another. I find twenty-one free vertebræ present in *R. americana* between the head and the lumbo-sacral portion of the vertebral column; but the axis is wanting in this specimen; so that the total will be twenty-two should none of the other vertebræ be absent, which does not appear to be the case. As in the specimen of *R. darwini* either four or five of the cervical vertebræ have been lost, I cannot speak with absolute certainty as to the number of free vertebræ present; but in all probability it is the same as in *R. americana*. The styloid processes (pleurapophyses) of all the cervical vertebræ examined in *R. darwini* exist as separate bones, as might, indeed, be expected from the immature condition of the individual. They are fully ankylosed in the third, fourth, and fifth vertebræ (putting the atlas, in which they do not exist, and the axis, which is missing, out of the question) of *R. americana*, partially so in the sixth, seventh, and eighth, and separate thence to the first rib-bearing vertebra.

In both species there are eight rib-bearing vertebræ, the eighth being partially ankylosed to the lumbo-sacral portion of the column. No very obvious differences, save those of size, are to be observed between the vertebral ribs of the two species. In both but three (the third, fourth, and fifth) are connected with the sternum by means of costal ribs. There is likewise no material difference in the form of the sterna of the two birds, allowing for the influence of age. In *R. americana* the two lateral halves (pleurostea) are united rather firmly together, but would admit of separation without much difficulty; while in *R. darwini* they are separate, partly in consequence



of immaturity of development, but also, I am inclined to believe, from more prolonged maceration.

*Pelvis.*—On comparing the pelves of the two birds it will be noticed that in *R. americana* the transverse processes of two vertebræ abut upon the iliac bone of either side, opposite its junction with the ischium and pubis; while in *R. darwinii* the transverse process of but one vertebra occupies this position, and this process is much shorter than the corresponding processes in *R. americana*, so that the acetabula of opposite sides are further removed from one another in that bird than in *R. darwinii*. In the specimen of the latter bird, owing to its youth, the ischiatic and pubic bones, though ankylosed to one another, are not yet ankylosed to the ilium, while in the older specimen of *R. americana* they are firmly ankylosed, although still presenting indications of the line of junction. A considerable difference, perhaps due in part to age, obtains between the posterior extremities of the ischium and pubis in the two birds. In *R. darwinii* they are separated by a considerable space, while in *R. americana* they are nearly in contact, owing to the development downwards and forwards of a strong process from the ischium.

*Shoulder-girdle.*—In the specimen of *R. americana* the coracoid and scapula are ankylosed, while in that of *R. darwinii* they are separate. In the former the strong internal process at the scapular end of the coracoid is much more developed than in the latter; and the inner border of the sternal extremity of the same bone is of a different form in the two birds, in *R. americana* being as it were cut away for the space of about a quarter of an inch, while in *R. darwinii* it presents a convex curve. A strong rounded process occurs at the proximal extremity of the scapula, at about the middle of its antero-inferior surface in *R. americana*, and is but feebly indicated in *R. darwinii*.

*Bones of the Wing.*—The humerus, radius, and ulna of the two birds present no conspicuous differences, save those of size. I have been unable to institute a comparison between the carpal bones of the two species, as they are incomplete in the skeleton of *R. americana* and missing in that of *R. darwinii*. In the former the os magnum is ankylosed to the proximal ends of the second and third metacarpals, and all three metacarpals are partially ankylosed; while in the latter the os magnum is unankylosed (missing), and all three metacarpals are as yet ununited. These latter bones closely resemble each other in form in both birds, with the exception that in the specimen of *R. americana* they are much more curved than in *R. darwinii*. This difference may possibly, however, be of an individual, not of a specific nature. The digits are incomplete in both skeletons, so that they could not be compared.

*Bones of the Leg.*—The general form of the femur is the same in both skeletons; but the intercondyloid fossa is much deeper in *R. darwinii* than in *R. americana*, and is due probably to its youthful condition. The various elevations and depressions on the shaft of the bone, indicative of the origin and insertion of muscles, are, as might be expected, more distinctly marked in the latter species. In the tibia of *R. americana* a strong procnemial ridge is developed from



the epicnemial process; while in that of *R. darwini* the process and ridge are in a rudimentary condition, but would doubtless have increased with the advancing age of the bird. In the latter an epiphysis still remains ununited to the superior extremity of the bone, while in the former it is firmly ankylosed and only indicated by a roughened line. This epiphysis bears the epicnemial process, and also forms about half of the superior articulating surface of the tibia. Very little difference is observable between the distal ends of this bone in the two species. In neither is there any trace of suture indicative of the junction of the tarsal element (astragalus), which furnishes the trochlear surface, articulating with the tarso-metatarsal. As in other Struthionidæ, so in neither *R. americana* nor *R. darwini* is there a bony bridge over the precondylar groove which lodges the tendon of the extensor longus communis digitorum; but in both a tuberosity is present at the outer side of the groove. The *fibulæ* could not be compared, as the bone was missing in the specimen of *R. darwini*. Nearly all the differences exhibited by the tarso-metatarsus of both species may probably be ascribed to the difference in age. Thus this bone of *R. darwini* differs from that of *R. americana* in the complete separation of the tarsal element, as well as that of the proximal extremities of the three metatarsals. In both skeletons the innermost of the three trochlear condyles of the distal end of the bone is the shortest. In *R. americana* the tendinal groove between the outer and middle trochlea is spanned by a bony bridge, which is not fully developed in *R. darwini*. The anterior surface of the shaft of the metatarsus is more deeply hollowed out in *R. americana* than in *R. darwini*; but in the latter the posterior surface is more excavated than the former, and is further defined externally by a strongly marked ridge. No noteworthy differences, with the exception of those of size, appear to prevail between the bones of the toes in the two species. They are proportionally longer in *R. darwini* than in *R. americana*.

I subjoin a list of measurements of the bones:—

	<i>R. americana.</i>		<i>R. darwini.</i>	
	in.	lin.	in.	lin.
Length of cranium from occipital condyle to top of upper mandible . . . . .	5	9½	5	0
Length of ilium, measured along mesial line of dorsal surface of pelvis . . . . .	11	0	8½	0
Length of sternum from proc. lat. ant. to posterior border . . . . .	5	0	3	10
Length of coracoid . . . . .	3	8	3	2
— scapula, measured in straight line	4	11	3	11
— humerus . . . . .	9	3	7	9
— ulna . . . . .	6	8	5	4
— radius . . . . .	6	6½	5	3
— middle metacarpal . . . . .	2	3	2	2
— femur . . . . .	7	5	6	9
— tibia, measured along inner surface	11	3	10	9
— tarso-metatarsus . . . . .	11	0	10	0

EXPLANATION OF PLATES VI. & VI<sup>a</sup>.

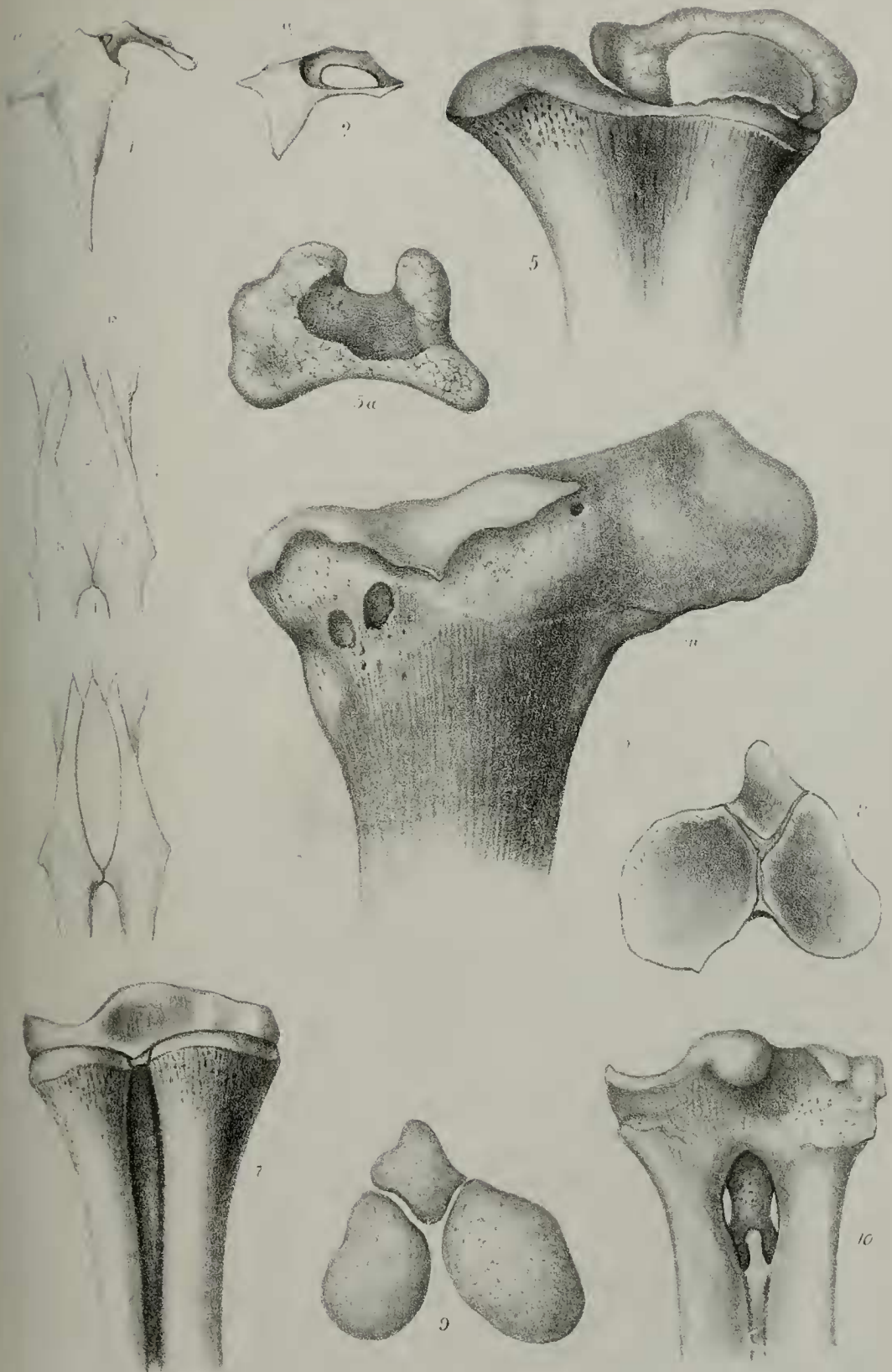
- Fig. 1. Right lachrymal of *R. americana*, seen from the side.  
 2. Right lachrymal of *R. darwini*, seen from the side. In both, *a* marks the surface of articulation with the skull.  
 3. Ethmoido-nasal region of *R. americana*, viewed from above.  
 4. Ethmoido-nasal region of *R. darwini*, viewed from above. In both, E marks the horizontal plate of the ethmoid, F the frontals, N the nasals, and I the tip of the nasal process of the intermaxillary.  
 5. Superior extremity of left tibia of *R. darwini*, seen from the inner side, with the epiphysis. *a*, epiphysis, seen from above.  
 6. Superior extremity of left tibia of *R. americana*, showing the strongly developed procnemial process. *a*, line indicating the junction of epiphysis.  
 7. Upper extremity of right tarso-metatarsus of *R. darwini*, showing the tarsal element *in situ* and the separated heads of the three metatarsals.  
 8. Inferior surface of tarsal element of *R. darwini*.  
 9. Superior surface of heads of three metatarsals of *R. darwini*.  
 10. Upper extremity of right tarso-metatarsus of *R. americana*, showing ankylosis of tarsal element and of heads of the three metatarsals.  
 11. Right side of posterior part of pelvis of *R. darwini*.  
 12. Right side of posterior part of pelvis of *R. americana*.  
 13. Left coracoid of *R. darwini*.  
 14. Sternal extremity of left coracoid of *R. americana*.  
 15. Second and third metacarpals of *R. darwini*.  
 16. Metacarpus and os magnum (*a*) of *R. americana*.

2. Catalogue of an Arctic Collection of Birds presented by Mr. JOHN BARROW, F.R.S., to the University Museum at Oxford; with Notes on the Species. By JAMES EDMUND HARTING, F.L.S., F.Z.S.

[Received January 6, 1871.]

A recent donation by Mr. John Barrow, F.R.S., to the University Museum at Oxford has afforded ornithologists an opportunity of examining an interesting collection of birds from high northern latitudes. Through his interest at the Admiralty, Mr. Barrow was enabled to enlist the services of several naval officers who took part in the various arctic expeditions which were fitted out from time to time between the years 1848 and 1855; and through their exertions the present collection was brought together.

These officers were:—Capt. Sir Leopold M<sup>c</sup>Clintock, F.R.S., Capt. (now Vice-Admiral) Collinson, C.B., H.M.S. 'Enterprise,' 1850-54; Mr. Anderson, Surgeon to the 'Enterprise,' Capt. (now Rear-Admiral) Moore, H.M.S. 'Plover,' 1849-50; the late Lieut. Elliot, H.M.S. 'Phoenix,' 1853-54; Mr. Holman, Surgeon to the 'Phoenix,' Dr. M<sup>c</sup>Cormick, H.M.S. 'North Star,' 1852-53; Capt. Penny, H.M. discovery-ship 'Lady Franklin,' Capt. (now Rear-Admiral) Richards, H.M.S. 'Assistance,' 1854; the late Lieut. W. Hulme Hooper, R.N., 1851; Mr. Abernethy, Ice-master to the 'Felix,' 1851.

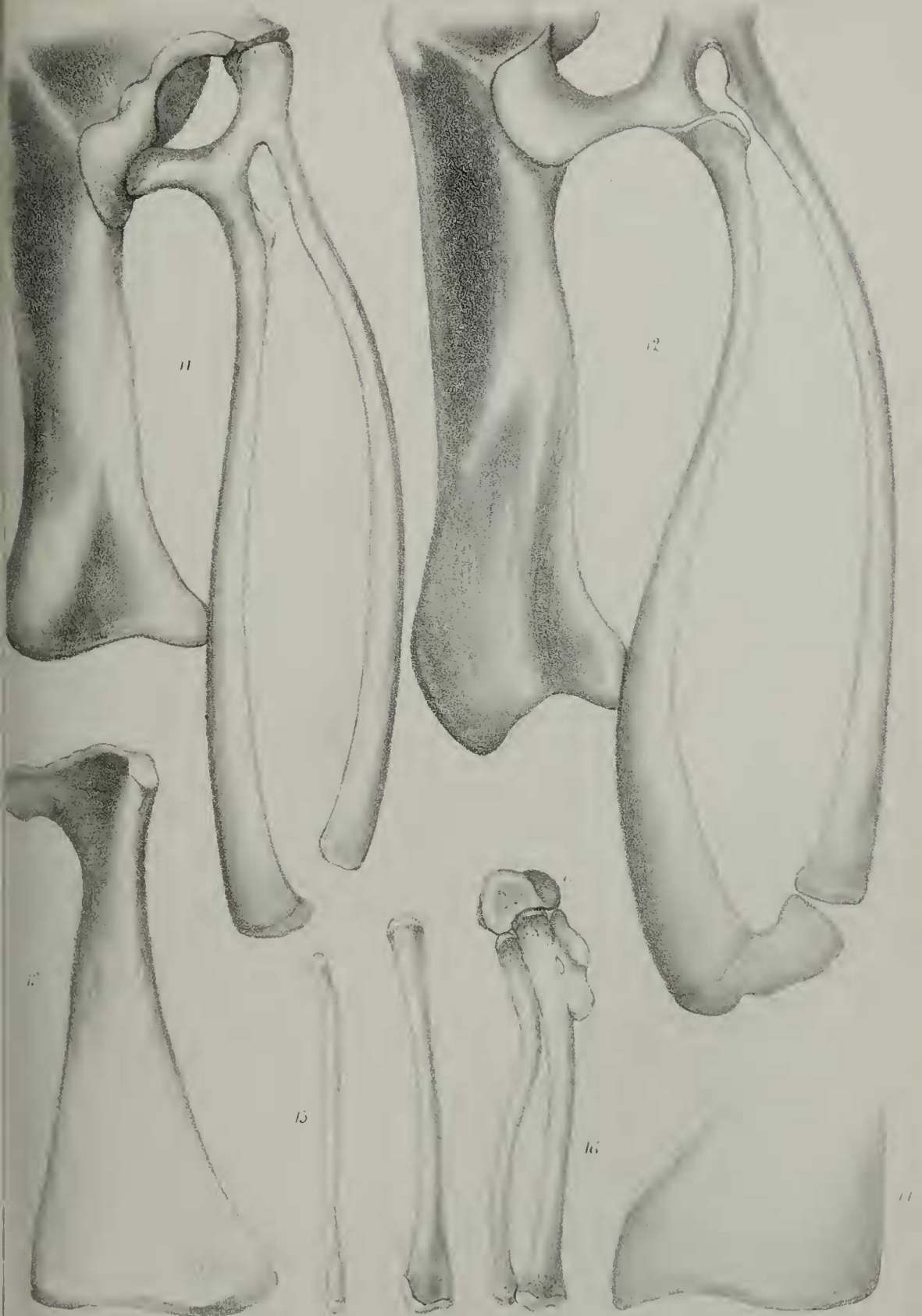


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The collection is comprised in 43 separate glass cases, containing 83 birds, belonging to 48 species; and some of these, from their comparative rarity, or from the particular state of plumage in which they happen to be, are of much interest and value.

Chief amongst these may be noted that curious little bird the Spoonbilled Sandpiper (*Eurynorhynchus pygmaeus*), of which the only specimen in summer plumage at present known to exist is in this collection\*. It was obtained by Capt. Moore on the Choris Peninsula, where the same officer also procured a specimen of the Mongolian Plover, *Aegialites mongolicus* (Pallas), in breeding-plumage, the most northern locality recorded for this species (*cf.* Ibis, 1870, p. 386).

Four species of that curious genus of tufted and horned Puffins (*Phalaris*) are in the collection, taken off the coast of Kamtschatka, and a remarkably fine pair of Sabine's Gull (*Larus sabini*), in breeding-plumage, obtained by Capt. Collinson, of the 'Enterprise,' off Melville Peninsula.

The geographical distribution of the species, as exemplified by the present collection, will be best understood by a reference to the map which I have designed to accompany it. From this it will be seen that many species have a more extensive range than has been hitherto suspected. That pretty little bird the Lapland Bunting was found on the Choris Peninsula, on the Mackenzie River, and on the south-west coast of Greenland; the Raven on the same peninsula, and on Beechy Island, Barrow Straits; the Golden Plover on the coast of Behring's Straits, Mackenzie River, and Melville Peninsula. The Purple Sandpiper, which was thought to be restricted to eastern North America and Europe (*cf.* Baird's Birds N. Amer.), was obtained by Captain Moore on the north-western shores of Behring's Straits.

The American Coot, *Fulica americana*, Gmelin, which had not previously been met with above 55°, was found by Lieut. Elliot of the 'Phoenix' almost as high as 70° in Jacob's Haven, opposite Disco; while the species holding the most northern range was found to be the Rock-Grouse, *Tetrao rupestris* (Gmelin), which was noted as plentiful on Melville Island, and was met with on the coast of North Devon by Capt. Richards, in the 'Assistance.'

This glance at the distribution of the birds leads to the inquiry whether some of the species met with in the nearctic region, and considered to be distinct, are not in fact identical with certain palæ-arctic species:—whether, for example, the Raven met with upon these expeditions is not identical with the European Raven; whether the Golden Plover obtained on the Choris Peninsula should be referred to the Asiatic *C. longipes*, or the American *C. virginicus*, or whether these two are not in fact identical; whether the Dunlin Sandpiper procured in the same locality should be considered distinct, under the title of *americana*, from the European and Asiatic *alpina*.

\* This specimen was described and figured in 'The Ibis' for 1869, p. 426, pl. xii.

These and other similar questions will be found adverted to under the head of the species to which they refer; and it has been deemed expedient to add to the catalogue such references and notes as may be likely to aid the researches of the student who may have occasion to consult it.

In consequence of several birds belonging to different species, and in some cases to widely different genera, being grouped together in one and the same case, it has not always been possible to arrange the cases satisfactorily. Subject to this inconvenience, the collection may be catalogued as follows:—

Case 1. GREENLAND FALCON.

*Falco candicans*, Gmelin, Syst. Nat. i. p. 275 (1788).

*Falco grœnlandicus*, Daudin, Traité d'Orn. ii. p. 107 (1800).

According to Holbøll this beautiful Falcon, which in the adult state is nearly pure white, is a resident species in Greenland. It is found nevertheless in other countries of the north, and has several times been procured in Great Britain. The two specimens in this case were killed at Disco, in 1853, by Dr. M'Cormick, of H.M.S. 'North Star.'

Case 2. PEREGRINE FALCON.

*Falco peregrinus*, Gmelin, Syst. Nat. i. p. 272.

A male bird, caught at the masthead of H.M.S. 'North Star,' in Davis Straits, close to the coast of Greenland, in the spring of 1852.

Case 3. SNOWY OWL.

*Strix nyctea*, Linn. Syst. Nat. i. p. 132 (1766).

*Nyctea nivea*, Daudin, Traité d'Orn. ii. p. 190 (1800).

Some interesting notes on the migration of the Snowy Owl, as observed by Captain M'Kechnie, of the ship 'John and Robert,' between Quebec and Belfast, will be found in the 'Annals of Natural History' for April 1839.

Cases 4 & 5. RAVEN.

*Corvus corax*, Linn.

A male bird killed on Beechy Island, Barrow Straits, 1st August, 1853, and brought home by Dr. M'Cormick, of H.M.S. 'North Star;' and a second obtained on Choris Peninsula, Behring's Straits, in 1849, by Capt. Moore, in H.M.S. 'Plover.'

Whether the American Raven is identical with the European *Corvus corax*, or a distinct species, is not quite clear. Prof. Schlegel has figured the head of a Raven from Labrador side by side with one from Germany; and the superiority in size of the former is very apparent\*. From the measurements given in the article referred to, it appears that specimens from Labrador and Greenland exceed

\* "Notice sur le genre *Corvus*," Bijdrag. Koninkl. Zool. Genoots. Amsterdam 1859.



others from Holland and Germany by 3 inches in total length, by  $2\frac{1}{2}$  inches in length of wing, by  $\frac{1}{4}$  inch in length of bill, by  $\frac{1}{3}$  inch in length of tarsus. According to Prince Maximilian\*, the only difference discernible to him between the European and American Ravens was the slender bill of the former. Prof. Baird says†, "I have not at hand specimens of the European Raven for the purpose of making a critical comparison with our own; but most recent authors agree in considering them distinct, although Audubon maintained the contrary opinion."

#### CASE 6. SNOW-BUNTING.

*Emberiza nivalis*, Linn. Faun. Suec. p. 82.

*Plectrophanes nivalis*, Meyer, Taschenb. Deutsch. Vög. p. 58.

Two in early spring plumage, brought home by Lieut. Hulme Hooper, R.N., in 1851, from Mackenzie River.

Case 7. In this case are nine birds, belonging to four species, namely:—

#### LAPLAND BUNTING.

*Emberiza lapponica*, Nilsson, Orn. Suec. i. p. 157.

*Plectrophanes lapponica*, Selby, Linn. Trans. xv. p. 156, pl. i.

Two males and a female; Godshaab, June 3, 1865.

#### MEALY REDPOLE.

Two females; Godshaab, June 1, 1865.

#### GREY PHALAROPE.

*Phalaropus fulicarius* (Linn.).

Two; Godshaab, June 13, 1865. This bird in summer plumage is the *Tringa fulicaria* of Linnæus, Syst. Nat. i. p. 249, and in winter his *Tringa lobata* (l. c.).

#### RED-NECKED PHALAROPE.

*Phalaropus hyperboreus* (Linn.).

For this species, of which there are two specimens in the case, no locality is noted.

Case 8. In this case are four species belonging to widely different genera, all of which appear to have been brought from Mackenzie River, probably by Lieut. Hulme Hooper, R.N., before referred to.

#### LAPLAND BUNTING.

*Plectrophanes lapponica* (Nilsson).

A male.

\* Reise durch Nord-Amer. ii. p. 289.

† Birds N. America, p. 561.

## RUSTY BLACKBIRD.

*Scolecophagus ferrugineus*, Swainson ; Baird, Birds N. Amer. p. 551.

*Scolecophagus niger*, Bonap. Consp. p. 423.

*Turdus hudsonius* and *noveboracensis*, Gmelin, Syst. Nat. i. p. 818.

## TURNSTONE.

*Streptilas interpres*, Illiger, Prod. Mamm. et Av. p. 263.

*Tringa interpres*, Linnæus, Faun. Suec. p. 63.

*Cinclus interpres*, G. R. Gray, Gen. B. iii. p. 549.

## GOLDEN PLOVER.

*Charadrius virginicus*, Borekhausen and Bechstein, Licht. Verz. Doubl. 729 (1823).

*Charadrius pluvialis*, Wilson, Am. Orn. vii. p. 71, pl. lix. ; Swainson, Faun. Bor.-Amer. ii. p. 623 (*nec* Linnæus).

Case 9. The birds in this case, eleven in number, and belonging to eight species, were procured by Captain Moore, of H.M.S. 'Plover,' on the Choris Peninsula, Behring's Strates, in 1849. The species are :—

## GREY-HEADED WAGTAIL.

*Budytes flava* (Linnæus).

## SNOW-BUNTING.

*Plectrophanes nivalis* (Linnæus).

Two.

## LAPLAND BUNTING.

*Plectrophanes lapponicus* (Nilsson).

## MONGOLIAN PLOVER.

*Ægialites mongolicus*, Pallas, Reise, iii. p. 700 ; Zoogr. R.-A. ii. p. 136.

*Ægialites pyrrhothorax*, Temm. Man. d'Orn. 2nd ed. iv. p. 355.

Two in summer plumage. The most northern locality recorded for this species (*cf.* Harting, 'Ibis,' 1870, p. 389).

## SPOONBILL SANDPIPER.

*Eurynorhynchus pygmaeus* (Linnæus), Pearson, J. A. S. B. v. p. 127.

*Eurynorhynchus griseus*, Nilsson, Orn. Suec. ii. p. 29.

*Eurynorhynchus orientalis*, Blyth, Ann. Mag. Nat. Hist. xiii. p. 178.

This specimen may be characterized as the rarest in the collection. Very few specimens have ever been procured ; and this is the only one in *summer* plumage known to exist. A figure and description of this specimen will be found in 'The Ibis,' 1869, p. 426.

## DUNLIN.

*Tringa alpina*, Linn. Syst. Nat. i. p. 249.

*Tringa cinclus*, Linn. *op. cit.* p. 251.

*Tringa variabilis*, Meyer, Taschenb. Deutschl. Vög. ii. p. 397.

This specimen is interesting as having been procured at a point where the European Dunlin, which is also found in Asia, would be expected to meet the variety *americana* of Cassin. Prof. Baird considers that *T. americana* is entitled to rank as a species. He says:—“Of eight specimens from Europe and Asia now before us, not one ought to be considered as specifically the same as the American bird. The size (of the former) is invariably smaller, and the bill disproportionately shorter. In fact we have little doubt that the bird inhabiting both the Atlantic and Pacific coasts of the Republic is quite distinct, and may be easily recognized” (Birds N. Amer. p. 719). On comparing a specimen from New Jersey, in full summer plumage, with one which was shot off the nest in Benbecula (Hebrides), not only are the differences pointed out by Prof. Baird apparent, but it is also observable that the upper portions of the plumage in the American bird are considerably pervaded by bright rufous brown, whereas in the same parts of the Scottish bird black is the prevailing colour. Further, the black of the underparts, which in the Scottish bird extends (as in *Squatarola helvetica*) from the vent almost to the chin, is confined in the American bird (as in *Eudromias morinellus*) to the belly only. Whether this large race of Dunlin, known as *Tringa americana*, is specifically distinct or not, it is not confined to America as is generally supposed. I have specimens in winter plumage now before me, procured by Mr. Swinhoe in Amoy, and others in autumn plumage shot by myself in this country, which, as regards measurements of bill, wing, and tarsus, correspond in every way with examples from New Jersey. They differ only in colour, having been obtained at different seasons of the year. As far as I can judge by the data before me, the smaller bird appears to have a more restricted range, and remains to nest in this country; while the larger bird does not breed with us, but is found on our coasts in spring and autumn, during the migration.

## GOLDEN PLOVER.

*Charadrius longipes*, Temminck.

*Charadrius xanthochilus*, Wagler, Syst. Av.

*Charadrius orientalis*, Temm. & Schleg. Faun. Jap. p. 104, t. 62; Gould, B. Australia, vi. pl. 13.

A similar difficulty here presents itself. We have a bird which, from the locality from which it was obtained, may be either the Asiatic *C. longipes* or the American *C. virginicus*\*.

The characters by which these two may be distinguished have not been defined. Both are smaller than the European *C. pluvialis*; and

\* Both these forms have been distinctly recognized by Prof. Blasius as having occurred on different occasions in Heligoland (*cf.* 'Ibis,' 1862, p. 71); and *C. longipes* has occurred in Malta (*cf.* 'Ibis,' 1865, p. 462).

both differ from it in having the axillary plumes smoke-grey instead of pure white. The tarsus, also, is somewhat longer and more slender in proportion than that of the European bird. I have now before me eight skins of *C. virginicus* from various American localities, north and south, and fourteen skins of *C. longipes* from India, China, Australia, and the Malay archipelago. A careful comparison of these gives the following results:—(1) That *C. longipes* is invariably smaller than *C. virginicus*, the respective measurements being as under—

	Bill. in.	Wing. in.	Tarsus. in.
<i>C. virginicus</i> . . . . .	1	7 to 7·4	1·6
<i>C. longipes</i> . . . . .	·8 to ·9	6·4 to 6·6	1·5
<i>C. pluvialis</i> . . . . .	·9	7·5	1·4

(2) That *C. virginicus* at all seasons (but more especially in winter) has far less of the golden colour on the dorsal plumage and on the breast than *C. longipes* has, the prevailing colour on the former bird being brown of two shades in winter, interspersed with black and golden in summer.

I have a Golden Plover in my collection which was taken at sea in lat. 69° 30' N., long. 173° 20' E., many miles N.W. of Point Barrow. This is the furthest point north, so far as I am aware, at which a Golden Plover has been met with. Its measurements are, bill ·8 in., wing 6·5, tarsus 1·5.

These measurements, as well as the general coloration, show that the specimen is referable to the Asiatic, and not to the American race, although it was met with much nearer to the American than to the Asiatic coast.

The Golden Plover from Australia is identical in every way with the bird from India, China, and the Malay countries.

#### PURPLE SANDPIPER.

*Tringa maritima*, Brünnich, Orn. Bor. p. 54.

*Tringa striata*, Linn. Syst. Nat. i. p. 248.

Prof. Baird gives Eastern North America and Europe as the habitat of this species. Its appearance in this case on the N.W. coast of N. America shows that it has a more extensive range. The Purple Sandpiper visits the Faroe Isles, Iceland, Greenland, and Spitzbergen; and Von Baer found it in Nova Zembla—an observation recently confirmed by Mr. Gillett (*cf.* Ibis, 1870, p. 306). Sir Edward Parry found it common in Davis Straits and Baffin's Bay, on Winter Island, Port Bowen, and Hecla Cove. Sir J. Richardson says that it breeds on Melville Peninsula and the shores of Hudson's Bay.

Case 10 contains another example of this species (*T. maritima*). American and European specimens are absolutely identical.

Case 11. The five birds, of different species, in this case were procured by Captain Collinson, C.B. (to whom reference has been before made), in H.M.S. 'Enterprise.' No locality is recorded for any of them; but, judging from the localities attached to the other



birds procured by the same officer, they were doubtless obtained in high northern latitudes. The five species are:—

**GREY PLOVER.**

*Squatarola helvetica* (Linnæus).

One of the most widely distributed species. It frequents the sea-coasts, and fresh and salt waters of all known countries within the temperate and tropical zones.

**GOLDEN PLOVER.**

*Charadrius virginicus*, Borckhausen.

Before referred to, in cases 8 & 9.

**LITTLE RINGED PLOVER.**

*Ægialites minor*, Boie, Isis, 1822, p. 558.

It is a little remarkable if this bird was obtained on the coast of North America, as it has not hitherto been recognized as an American species. Its place is supplied by *Æ. semipalmatus* in the New World, where our common Ringed Plover (*Æ. hiaticula*) is represented by the larger-billed *Æ. wilsonii*.

**BUFF-BREASTED SANDPIPER.**

*Tringa rufescens*, Vieillot, N. Dict. d'Hist. Nat. xxxix. p. 470; Baird, Birds N. Amer. p. 739; Yarrell, Trans. Linn. Soc. xiv. p. 109, pl. 2.

A good specimen of an American bird which, although not rare, it is very difficult to procure.

**GREY PHALAROPE.**

*Phalaropus fulicarius* (Linnæus).

Before noted, in case 7.

**Case 12. AMERICAN COOT.**

*Fulica americana*, Gmelin, Syst. Nat. i. p. 704; Sabine, Frankl. Journ. p. 690; Faun. Bor.-Amer. (Birds) p. 404.

*Fulica atra*, Wilson, Am. Orn. ix. p. 61, pl. lxxiii.

*Fulica wilsonii*, Stephens, Shaw's Zool. xii. p. 236.

Distinguishable from the European *Fulica atra* by the white on the crissum and wings, and by the frontal plate being red instead of white. The authors of 'Fauna Boreali-Americana' state (*l. c.*), "It was not seen by us near Hudson's Bay, nor higher than the 55th parallel." The specimen in this case is from Jacob's Haven, opposite Disco, and was brought home in 1854 by Capt. Elliot, in H.M.S. 'Phoenix.'

**Cases 13, 14, 15. ROCK-GROUSE.**

*Lagopus rupestris* (Gmelin).

*Tetrao rupestris*, Gmelin, Syst. Nat. i. p. 751.

*Lagopus rupestris*, Leach, Zool. Misc. ii. p. 290.

This, the American Rock-Grouse, differs from the Willow-Grouse (*Lagopus albus\**, Gmel.), which is also found in Northern America, in its superior size and shorter and stouter bill. The male, too, has a black stripe through the eye, which is not found in either sex of the Willow-Grouse. Figures of both species will be found in the 'Fauna Boreali-Americana,' ii. pp. 351 & 354.

The Rock-Grouse is reported by Captain Sabine (*l. s. c.*) to be common in summer on Melville Island, a locality whence several other species in this collection were obtained.

The specimen in case 13 is an adult female, in full summer plumage, procured by Capt. Richards, H.M.S. 'Assistance,' in Wellington Channel, in 1854.

Case 14 contains a female bird in autumn plumage, obtained on the west coast of Greenland, in 1853, by Capt. Elliot, in H.M.S. 'Phoenix.'

The example in case 15 is in winter plumage, and was brought home by Capt. Collinson, C.B., in H.M.S. 'Enterprise' (1850-54).

#### Case 16. EIDER DUCK.

*Somateria mollissima*, Leach.

*Anas mollissima*, Linnæus, Syst. Nat. i. p. 198.

A male bird from Cape Sahacketon, Baffin's Bay, brought home by Capt. Elliot, H.M.S. 'Phoenix,' in 1854.

Although not uncommon on the Atlantic and Arctic coasts of the northern hemisphere, this bird does not appear to have been met with on the North-Pacific coast.

#### Case 17. KING DUCK.

*Somateria spectabilis*, Leach.

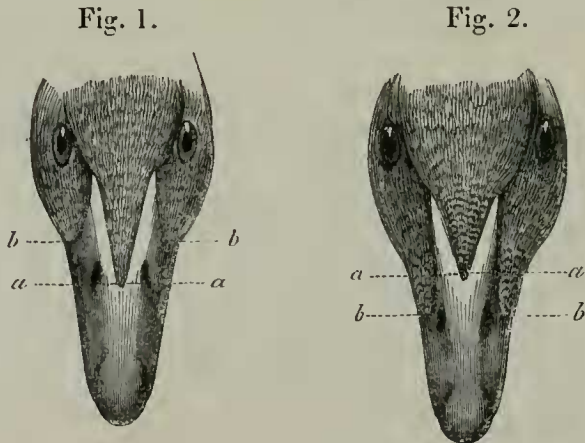


Fig. 1. Upper surface of bill of King Duck.  
2. Upper surface of bill of Eider Duck.

\* *Lagopus albus*, Audubon, B. Amer. v. p. 114, pl. 299. *Tetrao saliceti*, Sabine, App. Frankl. Nar. p. 681; Richardson, App. Parry's Second Voy. p. 347; Swainson, Faun. Bor.-Amer. ii. p. 351.

The case contains a male and female of this species; but the locality whence they were procured has not been noted.

The female of the King Duck, although as a rule somewhat smaller and redder, so closely resembles the female of the Eider, as to be with difficulty recognized except by comparison. A good mark of distinction, however, is the relative position of the ridge of feathers which runs down the centre and each side of the bill. In the Eider the centre ridge (fig. 2, *a a*) is shorter than the lateral ridges, *b b*; in the King Duck (fig. 1) the reverse is the case.

Case 18. HARLEQUIN DUCK.

*Clangula histrionica* (Leach); Swainson, Faun. Bor.-Amer. ii. p. 459.

A male, in summer plumage, procured at Holsteinborg, on the north coast of Greenland, by Capt. Elliot, in H.M.S. 'Phoenix,' in 1854.

The female is much inferior in size to the male; and the young male resembles the female.

Case 19. LONG-TAILED DUCK.

*Anas glacialis*, Linnæus, Syst. Nat. i. p. 203.

*Harelda glacialis*, Leach, Gen. Zool. xii. p. 174.

A male bird; no locality noted.

Case 20. RED-BREASTED MERGANSER.

*Mergus serrator*, Linnæus, Faun. Suec. p. 48.

A male, in summer plumage, procured at Holsteinborg, Davis Straits, in 1854, by Capt. Elliot, H.M.S. 'Phoenix.'

Case 21. GREAT NORTHERN DIVER.

*Colymbus glacialis*, Linn. Syst. Nat. i. p. 221.

This bird, in the summer plumage, was obtained by Mr. Anderson, Surgeon to H.M.S. 'Enterprise,' on the northern coast of America in 1851.

Case 22. BLACK-THROATED DIVER.

*Colymbus arcticus*, Linn. Syst. Nat. p. 221.

A fine specimen, in summer plumage, procured by Capt. Moore, H.M.S. 'Plover,' in Behring's Straits in 1853.

Case 23. RED-THROATED DIVER.

*Colymbus septentrionalis*, Linn. Syst. Nat. i. p. 220.

In summer plumage. Killed in Davis Straits in 1853 by Mr. Holman, Surgeon to H.M.S. 'Phoenix.'

This species has a wide geographical range both in Europe and America. Professor Baird says that on the latter continent during the winter it goes as far south as Maryland, and that it is also found on the Pacific coast.

## Case 24. COMMON GUILLEMOT.

*Uria troile*, Linn. Syst. Nat. p. 220.

In summer plumage. No locality noted. Common on the northern coasts of Europe and America. A specimen in the Museum of the Smithsonian Institution was obtained by the expedition under Capt. Rodgers, on Herald Island, inside Behring's Straits.

## Case 25. BRÜNNICH'S GUILLEMOT.

*Uria brünnichii*, Sabine, Trans. Linn. Soc. xii. p. 539.

A good specimen in summer plumage, with the eggs. Brought home in 1851 by Mr. Abernethy, ice-master to H.M.S. 'Felix.'

Although similar in colour to *Uria troile*, this species is recognizable by its much shorter and stouter bill. It is found on the northern coasts of Europe, Asia, and America, and on the last named it is said to be the commoner species (*cf.* Baird, B. N. Amer. p. 915).

## Cases 26 &amp; 27. BLACK GUILLEMOT.

*Uria grylle*, Linn. Syst. Nat. p. 220; Latham, Ind. Orn. ii. p. 797.

Two in summer plumage (26), and one in winter (27). The locality not noted.

## Case 28. RAZORBILL.

*Alca torda*, Linn. Syst. Nat. p. 210.

For this specimen, which is in summer plumage, no locality has been noted. The species is very abundant on the N.E. coast of N. America, and appears to be in every way identical with the Old-World species.

## Case 29. LITTLE AUK.

*Alca alle*, Linn. Faun. Suec. p. 50.

Male, female, and young; the two last (taken from the nest in Wolstenholm Sound, lat.  $76\frac{1}{2}^{\circ}$  N., long.  $68^{\circ}$  W.) were brought home in 1851 by Mr. Abernethy, ice-master to H.M.S. 'Felix.'

## Case 30. NORTHERN PUFFIN.

*Mormon glacialis*, Leach (*nec* Audubon, *nec* Gould); Baird, Birds N. Amer. p. 903.

Killed in Behring's Straits, and brought home by Capt. Moore, H.M.S. 'Plover,' 1849-50.

Professor Baird thinks this may be the young of *M. corniculata*, Naumann, "only differing from it in having the throat white, or light ash" (instead of black), "and a short obtuse horn over the eye" (*cf.* Birds N. Amer. p. 903). It is possible, however, that the specimens which suggested this opinion were immature, or obtained in winter. Professor Newton, who procured several specimens of *M. glacialis* in Spitzbergen, and who considers it distinct



from both *M. corniculata* and *M. arctica*, has figured it with a black throat (cf. 'Ibis,' 1865, pp. 212, 213, pl. vi.).

Case 31. CRESTED PUFFIN.

*Phaleris cristatella*, Bonap. Comp. List (1838) *nec* Temm.; Baird, Birds N. Amer. p. 906.

*Alca cristatella*, Pallas, Spic. Zool. v. p. 18.

Three procured in Behring's Straits, 1849-50, by Capt. Moore, H.M.S. 'Plover.'

This remarkable genus, of which the present collection contains four species in good preservation, is peculiar to Kamschatka, the islands contiguous to Japan, and Bird Islands between Asia and America. In most collections this genus is very poorly represented, owing to the great difficulty of obtaining specimens; and it would not be easy to find anywhere a better series than is here exhibited.

The present species, *Phaleris cristatella*, Bonap., is the largest of the genus. It is easily recognized by the upright horny caruncles on the bases of both mandibles. In a fresh state the colour of the bill and of these caruncles is bright orange-red at the base, and yellow at the tip.

Case 32. PARROT-BILLED PUFFIN.

*Phaleris psittacula*, Stephens, Gen. Zool. xiii. p. 44 (1826).

*Alca psittacula*, Pallas, Spic. Zool. v. p. 13.

*Ombria psittacula*, Eschscholtz, Zool. Atlas, iv. 3; Baird, Birds N. Amer. p. 910.

Three specimens, also procured in Behring's Straits by Capt. Moore, who found the species most numerous towards the western shores of America. Prof. Baird, who has included this species in his 'Birds of North America' under the title of *Ombria psittacula*, appears to think that, although nearly related to *Phaleris*, it has a stronger relationship to *Mormon*. Alluding to the very singular bill which characterizes this species, and which seems to attain a maximum of oddity amongst the queer bills of this family of birds, he adds, "the whole affair looks as if it might be a nose of wax, badly pinched and jerked upwards, especially the under mandible."

Case 33. LITTLE HORNED PUFFIN.

*Phaleris microceros*, Brandt, Bull. Acad. St. Pétersb. i. p. 346 (1837); Baird, Birds N. Amer. p. 908.

*Phaleris nodirostra*, Bonap. Comp. List, p. 66 (1838).

Three from the same source as the last named.

The species appears to be common on the coasts of North-western America and North-eastern Asia.

Case 34. TUFTED PUFFIN.

*Phaleris cirrhata* (Gmelin).

*Alca cirrhata*, Gmelin, Syst. Nat. i. p. 553; Pallas, Spic. Zool. v. p. 7.

*Mormon cirrhatus*, Bon. Syn. 429; Baird, Birds N. Amer. p. 902.

Two from the same source as the last mentioned.

The Tufted Puffin is one of the most abundant species of this family on the coasts of Western and North-western America. It is easily recognized by the pendent crest-like feathers on each side of the head, and seems to form a connecting-link between *Mormon* and *Phaleris*.

#### Cases 35 & 36. IVORY GULL.

*Larus eburneus*, Gmelin, Syst. Nat. i. p. 596; Rich. & Swains. Faun. Bor.-Amer. ii. p. 419.

Distinguishable in the adult state by its entirely white plumage, yellow bill, and black legs. The two specimens here exhibited were taken in 1851, in Assistance Harbour, Barrow Straits,  $74\frac{1}{2}^{\circ}$  N. lat.,  $74\frac{1}{4}^{\circ}$  W. long., by Mr. Abernethy, ice-master to H.M.S. 'Felix.'

#### Case 37. WESTERN GULL.

*Larus occidentalis*, Audubon, Orn. Biog. v. p. 320; Baird, Birds N. Amer. p. 845.

One, killed on Choris Peninsula, Behring's Straits, in 1849, by Captain Moore, H.M.S. 'Plover.'

This species, of which the habitat is the north-west coast of America, is equal in size to *Larus argentatus*, but has a shorter wing, and is distinguishable by its much darker mantle.

#### Case 38. GLAUCOUS GULL.

*Larus glaucus*, Brännich, Orn. Bor. p. 44; Rich. & Swains. Faun. Bor.-Amer. ii. p. 416; Baird, Birds N. Amer. p. 842.

Shot by Sir Leopold M'Clintock on Melville Island.

Individuals of this arctic species vary considerably in size. The young have the upper portion of the plumage yellowish white, mottled with pale brown; the underparts grey; the tail white, irregularly spotted with pale brown; bill yellow with tip horn-colour. It is in this plumage usually that we find the examples which are procured in Great Britain.

#### Case 39. SABINE'S GULL.

*Larus sabinii*, Sabine, Trans. Linn. Soc. xii. p. 520, pl. 29 (1818); Greenl. Birds, p. 551. no. 23; Richardson, Append. Parry's Second Voy. p. 360; Richards. & Swains. Faun. Bor.-Amer. p. 428.

Specimens of this bird in summer plumage are very rare in collections. The species was discovered by Capt. Sabine at its breeding-station on some low rocky islands off the coast of Greenland. He subsequently procured a pair at Spitzbergen. It was found in Prince Regent's Inlet during Sir Edward Parry's first voyage; and during his second voyage several specimens were obtained on Melville Peninsula.

Of late years young birds of this species have occasionally been met with on our own shores. It may be readily distinguished at all seasons by its forked tail, which in the adult is entirely white; in the young banded at the extremity with black. The adult bird in summer has the head and upper part of the throat blackish grey, terminated by a velvet-black collar. The bill is black, with the tip yellow. Legs and feet black.

The present case contains a remarkably fine pair in full summer plumage, obtained by Capt. Collinson on the north coast of America, probably in Fox Channel, during a cruise in H.M.S. 'Enterprise' between the years 1851-1854.

Case 40. RICHARDSON'S SKUA.

*Lestrus parasiticus*, Linn. Syst. Nat. i. p. 226.

*Lestrus richardsonii*, Swainson, Faun. Bor.-Amer. ii. p. 433, pl. lxxiii.

Two specimens, of which no particulars have been preserved.

Case 41. BUFFON'S SKUA.

*Lestrus buffonii*, Boie, Isis, 1822, p. 562.

*Lestrus parasitica*, Rich. & Swains. Faun. Bor.-Amer. ii. p. 430.

Two, procured by Captain Collinson, in 'the 'Enterprise,' 1851-1854.

The habitat usually assigned to this species is the Arctic sea-coasts of Europe and America. Some interesting remarks on its nesting-habits will be found in Wheelwright's 'Spring and Summer in Lapland,' pp. 355-359. He found it breeding in some numbers on the Quickjock Fells, laying, as a rule, but two eggs, and feeding the young exclusively on crowberries (*Empetrum nigrum*).

The principal food of the old birds, in addition to the crowberry, he found to consist of beetles and small Crustacea. "I cannot hear of their breeding further south," he adds, "than Peleekaisin, perhaps one hundred miles south of Quickjock."

Case 42. ARCTIC TERN.

*Sterna macroura*, Naumann, Isis, 1819, p. 1847.

*Sterna arctica*, Temminck, Man. d'Orn. ii. p. 742 (1820).

Two procured in lat. 75° 30' N., long. 64° W., by Capt. Collinson, C.B., in H.M.S. 'Enterprise,' between 1850 and 1854.

Case 43. FULMAR PETREL.

*Procellaria glacialis*, Linn. Syst. Nat. i. p. 213.

The locality whence the single specimen in this case was procured has not been noted. The species abounds in the North-Atlantic Ocean, and in the larger bays and straits. It is a constant attendant upon the whalers, assembling in large numbers when a Whale is being cut up, and is so greedy and fearless on these occasions as frequently to approach within a few yards of the sailors.

### 3. On Birds from the Galapagos Islands. By PROFESSOR CARL J. SUNDEVALL, F.M.Z.S.

[Received January 16th, 1871.]

In May 1852, the Swedish Frigate 'Eugenie' (Commander Virgin), on its voyage round the world, visited the Galapagos Islands, chiefly for the purpose of making scientific observations and collections. Nine days elapsed from its coming to its departure; but of these, two whole days were lost, owing to the vessel being becalmed in the offing. The frigate called successively at the islands of Chatham, Charles, and James; and, in addition, the naturalists attached to the expedition made an excursion in one of the boats to Albemarle and Indefatigable Islands.

Notwithstanding the very wet weather, the collections made were considerable, the naturalists being kindly assisted, here as in every other part of the voyage, by the Commander and all the officers, and even by the crew.

Dr. Kinberg, the zoologist and surgeon of the expedition, took the trouble to determine, or have determined by others, the sex of almost every specimen of the birds, and to attach to it the name of the island on which it was found.

The voyage has been described by Lieutenant Skogman, in two volumes, large 8vo, with charts and illustrations (Stockholm, 1854), and by Mr. Anderson, botanist to the Expedition, in three volumes, small 8vo (also published in 1854).

The following is the list of the birds brought home. Most of the species are mentioned by Darwin in the 'Zoology of the Beagle—Birds,' 1841, and described there, or in this Society's 'Proceedings,' by Gould: these references, therefore, need not be quoted. Only nos. 15 and 24 are supposed to be new. Those which are new to the archipelago have a † prefixed: these are mostly water-birds, and probably only make a short stay there during the winter or for breeding. The following abbreviations are used to denote the islands on which the land-birds were taken:—Chm., Chatham; Ch., Charles; J., James; Alb., Albemarle; and Ind., Indefatigable.

- |  |                     |
|--|---------------------|
| 1. MIMUS MELANOTIS (Gould).                                      | Chm., Ch., J., Ind. |
| Conf. Obs. A.  |                     |
| 2. DENDRÆCA PETECHIA, L., var.                                   | Chm., Ch., J.       |
| <i>Sylvia aureola</i> , Gould, Darw.                             |                     |
| Descripta in Cons. Generis <i>Dendrœcæ</i> , Vet. Ak. Æfv. 1869, |                     |
| p. 608.  |                     |
| 3. CACTORNIS SCANDENS, Gould.                                    | Ch., J.             |
| 4. GEOSPIZA STRENUA, Gould.                                      | J.                  |
| 5. G. FORTIS, Gould.   | Ch., J.             |



6. *G. NEBULOSA*, Gould.      Chm., Ch.
7. *G. FULIGINOSA*, Gould.      Ch., J.
8. *G. PARVULA*, Gould.      Chm.
- †9. *CAMARHYNCHUS PROSTHEMELAS*, ScL. et Salv. P. Z. S. 1870,  
p. 325.      Chm., Ch., J.  
*Camarhynchus*, sp. inc., nob. in litt. et commercii.  
Tantum feminæ et juniores allatæ ; nullus niger.
10. *HIRUNDO MODESTA*.      J.  
*Hirundo concolor*, Gould, P. Z. S. 1837, p. 22.  
*Progne modesta*, Gould, Darw. Voy. Beagle, Birds, p. 39.  
Forma simillima *H. purpurea*, L., sed multo minor.
11. *PYROCEPHALUS NANUS*, Gould.      J., Ind.
12. *MYIARCHUS MAGNIROSTRIS*, ScL. et Salv.      Ch., J.  
*Myiobius magnirostris* (Gould), Darwin, Beagle, Birds, 48.  
Vide Obs. B.
13. *COLUMBA (ZENAIDA) GALAPAGENSIS*, Gould.      J.
14. *BUTEO GALAPAGENSIS*.  
*Polyborus galapagensis*, Gould, 1857.  
*Craxirex ! galapagensis*, Gould, Beagle, pl. 2.  
Vide Obs. C.
15. *ARDEA PLUMBEA*, n. sp.      J.  
Vide Obs. D.
16. *ARDEA VIOLACEA*, L. (var. ?).  
Vide Obs. E.
- †17. *HÆMATOPUS PALLIATUS*.
18. *ANOUS STOLIDUS* (L.).      Frequens.
19. *LARUS FULIGINOSUS*, Gould, Darw.      Ch., Ind.
20. *TACHYPETES AQUILUS* (L.).
- †21. *PELECANUS FUSCUS*, L. ; Schlegel, Mus. P.-B.  
Vide Obs. F.
- †22. *DYSPORUS CYANOPS*, Sundev. Physiogr. Tidskr. Lund, 1837 ;  
Ann. and Mag. N. Hist. 1846, vol. xvii.
- †23. *DYSPORUS LEUCOGASTER* (Bodd.).  
*D. fuscus* (Vieill. Gal.).

24. SPHENISCUS MENDICULUS, n. sp.

J.

Vide Obs. G.

25. ANAS BAHAMENSIS, L.

†26. A. MACULIROSTRIS, Licht.

### Observationes.

*A. Mimus melanotis.* Specimina numerosa hujus unius speciei allatæ, multum quidem inter se differunt et a *Mimis* a Darwinio et Gouldio descriptis distincti videntur; differentiæ vero non nisi varietates ætatis, sexus et tempestatis anni exhibent. Omnia Maio, brevi ante mutationem plumarum, occisa sunt. Ptilosis igitur seniorum valde trita et sordida, marginibus tectricum et apicibus rectricum laceris, nec nisi partim relictis.

*Mas senior* superne fusco-griseus, cervice non pallidior; maculis pilei anterioris, in basi plumarum, fuscis, parvis, obsoletis; dorsi nullis. Subtus totus sordide albus, gutture inferiore pectoreque anteriore (saltem lateribus) fusco-griseo lavatis (non maculatis). Latera ventris striolis angustis nigris notata. Supercilia obsoletiora, albida. Plumæ lori et postoculares (plagam auris magnam formantes) fuscæ, apicem versus decolores, interdum fere albidæ. Striola submalaris fusca. Alæ fuscæ, marginibus tectricum latis albis (nunc fere detritis). Remiges apice latius albido marginati. Rectrices fuscæ; laterales, utrinque 4, apice, in pogonio interno longius albidæ: plaga in penna extima circa 18 millim., in reliquis sensim brevior. Rostrum et pedes nigricantia.

Longit. tota circa 230 millim.; rostrum a fr. 26; ang. 32; ala 120; c. 110; t. 37.

*Fem. senior* similis mari; differt maculis dorsi magnis, fuscioribus; striolis laterum et stria malari latis, maculas oblongas fuscas exhibentibus. Paulo minor: r. 24 (30) millim.; ala 107; c. 105; t. 35; partes vero omnes, ut in mare, variables, paulo majores vel minores.

*Junior*, habitu primo vestitus, superne fuscus, pileo nigriore, cervice cum lateribus colli cinerascenti-pallidis. Plumæ dorsi fuscæ grisescente marginatæ, unde dorsum fusco maculatum. Subtus purius albus, jugulo toto pectoreque anteriore crebrius nigro maculatis: maculis parvis, triangularibus. Latera ventris parce fusco maculata. Supercilia minus evidentiâ, pallescentia. Lora et macula magna postocularis nigra. Alæ nigræ, tectricibus parvis griseo-albido marginatis; mediis et magnis late, pure albo marginatis, fascias 2 formantibus. Remiges extus pallido, apice latius albo marginati. Rectrices, utrinque 4, apice longius albæ (plaga in pog. int. extimæ pollicari, in pog. ext. brevi). ♂ r. 22 (28) millim.; ala 112; c. 114; t. 38. Alius (an ♀?), r. fr. 22; ala 100; t. 33. *Juniores* omnes (forte Martio vel Aprili nati) habitu *vix trito* vestiti, quem jam deponere cœperunt quidam; plumæ enim novæ erumpunt, colorem seniorum exhibentes; quod præsertim in lateribus pectoris antici apparet, ubi plumæ novæ, griseæ, inter albas, juveniles, observantur.

Specimina a Darwinio allata (Octobri occisa), habitu recentiore, non trito vestita. Macula auricularis sicut in junioribus nigro-fusca; nondum tritura et luce decolorata.

Præter hanc *Mimi* speciem duæ aliæ, parum distinctæ, ex his insulis a Darwinio allatæ, describuntur:

*M. trifasciatus* Gould, Darw., simillimus *M. melanoti*, sed major (ala 5 poll. Angl.=126 millim.). Regio auris alba, absque macula nigricante; tectrices alarum parvæ etiam albo marginatæ, unde fasciæ 3 numeratæ. Cauda paullo longior quam ala dicitur ( $5\frac{1}{2}$  poll.), quod vero in icone non apparet.

*M. parvulus* Gould, Darw. *Mimo melanoti* adhuc similior, macula auris nigra et fasciis alæ tantum 2 albis notatus, vix nisi magnitudine paullo minore differre videtur (ala  $3\frac{5}{8}$  poll.=92 millim.). Rectrices hujus, ut omnium, nimis breviter descriptæ.

Harum sp. prior tantum insulam Charles inhabitare dicitur, unde cam solam (nec 2 reliquas) accepit Darwin. Nobis tamen, ex illa insula nullum specimen hujus, sed unum *M. melanotis* allatum est.—*M. parvulus* tantum in insula Albemarle inventus est, unde *Mimo* nullum retulit navis Suecana. Inopinatum sane videtur, formas tres tam affines, insulas tam vicinas et ejusdem naturæ inhabitare. Sed ut scientiam nostram debito modo illustret res memorabilis, denuo in loco examinanda videtur, vel saltem specimina allata diligentius comparanda. Hand enim absonum videtur aves, quæ distinctæ habentur, nil esse nisi specimina paullum insolite formata ejusdem speciei. Sic *M. trifasciatus* forte inveniretur mas vetus, solito paullo major, plumis auris et tectricibus parvis radiis solis, vel ipsa ætate avis decoloratis. Alter vero, *M. parvulus*, simillimus videtur juveni hornotino, habitu novo nuper accepto, alis nondum satis adultis.

B. *Myiarchus magnirostris*, omni forma et colore simillimus *Myiarcho feroci* (L.); sed parvus, quasi specimen hujus avis pygmæum, vel per vitrum minuens visum. Quod bene observarunt Sclater et Salvin, nomine generico debito, in P. Z. S. 1870, p. 323, imponendo. Cauda tamen, ratione corporis, paullo brevior et minus rotundata.

C. *Buteo galapagensis*, etsi vitæ ratione et habitu quodam degenerato forte similis *Polyboris*, minime tamen illo generi affinis. Re vera inter accipitres buteoninos numerandus; qui, vel genus unum, magnum satisque polymorphum haberi possunt, vel in genera multa, parva distribuendi sunt. Hæc vero species, si generice separatur, *Pœcilopternis* Kp. dicendum; nomen enim alterum, "*Craxirex*," unicuique linguarum paullum perito detestabile.

D. *Ardea plumbea*, n. sp., affinis *A. scapulari* et præsertim *A. rufiventri*. Fusco-cinerea, unicolor, vitta gastræi indefinita, dilutiore (cinerea), a rostro ad anum ducta. Plumæ basi pallidiores. Alæ extus (in tectricibus pennisque cubiti) leviter virenti-æneæ, absque marginibus pallidis; margines enim tectricum remigumque potius paullo fusciores. Remiges primarii nigro-cinerei, cano micantes. Plumæ dorsi (ut in *A. scapulari* etc.) longæ, angustæ, acutæ, margine definitæ; basi nigriores, viridi-ænescentes; medio apiceque cine-

rascentes, rhachide tenuissima, pallida. Caput et cervix nigricantia, levissime ænescentia. Rostrum (siccatum) nigricans, subtus angustius pallescens; pedes (sicci) fuscrescentes.

Rostr. a fr. 68, altit. 15, ala 175, tars. 50 millim. ♂?

„ 67 „ 15, „ 165, „ 47 „ ?

Partes omnes ut in *A. scapulari* ejusque variet. Africana et Indica formatæ; tibia solummodo brevius nuda (circa 20 millim.); sed rostrum pro mole crassius. Crista occipitis nulla definita: plumæ ibi laceræ, ut in cervice.

Specimina 3 ex insula James allata.

E. *Ardea violacea* L. (varietas?). Specimen unicum allatum, sexus incerti, ab illis ex continenti Americana differre videtur colore ubique obscuriore, præsertim in collo ventrequè fusciorè, plagaque nigra, 25–30 millim. longa, in medio pogonii externi remigum 1–5. Specimen hoc fere adultum videtur; forte in initio anni tertii occisum? Caput ut in senioribus americanis pictum, sed albedo verticis minor et crista adhuc imperfecta. Striolæ albidæ juveniles ubique deperditæ; tarsus nulla parte tumidus. Plumæ dorsi angustæ, elongatæ; quædam longissimæ et valde fimbriatæ, ut in *A. violacea* seniore; sed sordide nigro-fuscæ, margine latiusculo, sat distincto, pallidius fusco (nec, ut seniorum, cano vel læte cærulescente). Alarum tectrices minores: multæ similes plumis dorsi; aliæ, ut tectrices majores et pennæ cubiti, sordidius fuscæ, vix vel tenuissime et obsoletius pallidimarginatæ. Pennæ cubiti apice fusco-canescens; primariæ lætius canescentes; 1–5 plaga pogonii externi medii nigra ornata, qualem in nulla alia *A. violacea*, seniore vel juniore, vidi. Magnitudo in hac specie media; rostrum vero inter minus crassa numerandum. R. a fr. 70, alt. 21, ala 270, t. 83 millim.

Specimina *Ardeæ violaceæ* numerosa, variæ ætatis, ex diversis Americæ partibus habemus; ex quibus hæc colligere posse credimus:

*Juvenis, habitu primo* (plus quam unum annum subsistente) vestitus: totus fuscus, creberrime albedo maculatus, pictura omni simillimus juveni *A. nycticoracis*, neque ab eo dignoscitur nisi rostro crassiore et tarso longiore. Tarsus in juv., ad volandum apto, digito medio cum ungue longior, 80 millim. explet vel excedit. (In *A. nycticorace*, etiam seniore, raro 70 millim. excedit: plerumque brevior; semper digito m. c. u. brevior.) Plumæ omnes fuscæ, stria media lata, apice latiore, initio albedo-fulva, dein pallidiore, tandem alba, notatæ.

*Habitus secundus* ubique obscure fuscus, striolis albidis multo angustioribus: in capite colloque filiformibus; in alis filiformibus, apice dilatatis; in gutture ventrequè latioribus; in dorso nullis, vel tantum vestigiis paucis, minimis. Plumæ elongatæ, lineares, nigræ, griseo marginatæ, in dorso erumpere cœperunt. Rostrum et pedes perfectiora.

*Habitus tertius* (dum completus) pictura omni exacte ut in avi vetere distributa, sed color ubique sordidior, fuscior (fere ut in avi Galapagensi). Collum et venter sordide fusco-grisea. Plumæ omnes dorsi et alarum nigro-fuscæ, limbo latiusculo pallidiore, fusco-griseo



(pro læte cærulescenti-cano seniorum). Specimina ejusmodi ex Brasilia et Callao habemus.

*Habitus perfectus* seniorum, ♂ et ♀, pulchre læteque cærulescenti-canus, nigro varius, capite pure albo nigroque picto. Incertum quo modo oriatur iste habitus, an sola mutatione coloris a fusco sordido ad purum lætumque, vel plumis fuscis depositis novoque habitu renato, qui quartus numerandus esset?

Hæc avis magnitudine sat variabilis:

		Rostr.		Ala.	Tars.
		long. a fr.	altit.		
Vetus, sexu ign. . .	Am. sept. . .	70	22	300	95
Bienn. sexu ign. . .	Callao . . . .	75	23	283	93
Bienn. ♀ . . . . .	India occ. . .	73	18	280	92
Bienn. . . . .	Brasil. . . . .	75	25	260	75
Vetus . . . . .	Guiana? . . . .	72	24	230	80

Sed, ut ad avem nostram galapagensis revertamur, incertum videtur an specificè differat. Etiam suspicari licet eam veram esse *A. violaceam*, in statu, inter habitus descriptos secundum et tertium medio, occisam: plumis albedo striatis omnibus depositis, ala vero extus plumis intermediis, mox iterum deciduis, totis fuscis, tecta, inter quas plumæ elongatæ, griseo marginatæ, erumpere cœperunt. Nota tamen descripta, nigra remigum 1-5. peculiaris et color fuscus, præsertim gutturis ventrisque, paullo obscurior quam in habitu tertio descripto videtur.

F. *Pelecanus fuscus* L. frequens fuisse videtur; 7 specimina allata, in quibus magna et parva (rostro 370, 310, 280 millim.), cervice alba, nigra, fusca; nullum cristatum.

G. *Spheniscus mendiculus*, n. sp. affinis *S. demerso*, sed statura parva, rostro longiore, maxilla inferiore lutea, apice nigra, pictura gulæ etc. distinctus. Long. tot. ♂ 500, ♀ 450 millim.

Niger, subtus albus. Capitis latera cum gula nigro-fusca, mento albo. Linea superciliaris angusta, alba, a macula lori majore incepta, aures cingens, in jugulo supremo cum pari conjuncta. Cervix et colli latera nigricantia. Color nigricans jugulum ambit ibique torquem format, albedinem juguli in fascias duas separantem. Linea infra-lateralis nigra (ut in *S. demerso*) linea laterali interjecta alba a nigredine dorsali separata, et in jugulo medio cum pari arcuatim conjuncta. Ala subtus nigra, cum vitta longitudinali, minus definita, albida, in carpo abbreviata. Rostrum nigrum, maxilla inferiore lutea (vel aurantiaca), apice ante nares nigra, limite definito. Pedes (sicci) fusi.

Ut in *S. demerso*, maxilla inferior apice truncata, et superior basi crebre plicato-striata:

	Rostris			Dig. m. c. u.	Pes totus (a talo).
	long. a fr.	ab ang.	alt. basi.		
♂ . . . .	57 <sup>mm</sup>	70 <sup>mm</sup>	21 <sup>mm</sup>	64 <sup>mm</sup>	102 <sup>mm</sup>
♂ . . . .	58	68	21	60	95
♀ . . . .	55	69	18	57	90

Aves descriptæ, ad litora et circa insulas frequentes, etiam manibus captæ sunt. Plures deinde, vivæ in navi servatæ, delectamento erant nautis, erectæ, vacillando circumvagantes, speciem præbentes pueruli mendicæ, veste prolixa, terram verrente et manicis pendulis instructa, induti. (Hinc nomen petitum, etsi habitus idem *Spheniscinis* omnibus verisimiliter communis.)

#### 4. On the Birds of Angola.

By R. B. SHARPE, F.L.S., Libr. Z.S., &c.—Part III.

[Received January 17, 1871.]

(Plate VII.)

Since my previous papers on the avifauna of Angola I have only received two collections, neither of them very extensive. The first was placed in my hands by my friend Mr. J. J. Monteiro, who brought a few birds with him on his recent return to England on account of his ill-health. I am happy to say that he has now completely recovered and has gone back to Angola; so that we may expect to have from him some more observations on the ornithology of that country, to the elucidation of the fauna of which he has contributed in so remarkable a manner.

For the second collection I am indebted to Mr. Cutter of Bloomsbury Street, who had received it, in his capacity as a natural-history agent, from Mr. Charles Hamilton, a gentleman now travelling in Angola. I have to thank Mr. F. G. H. Price, who is a personal friend of Mr. Hamilton, and who has aided him greatly in the objects of the expedition, for the following note, which has reference to the localities where the birds were collected:—

“Mr. Hamilton told me in a letter that he had killed most of his birds on the river Lucalla, and some near Cazengo. He informed me that birds were not plentiful, owing to the many enemies the young ones had. He likewise killed birds and caught butterflies in the vicinity of Galungo Alto.”

Having in my last paper (P. Z. S. 1870, p. 142) forgotten to give the number of species, I must here state that up to the present time I have recorded sixty as having been sent by Mr. Monteiro and Heer Sala. It will be interesting in a little while to compare the results obtained by the English naturalists with those obtained by Signor Anchieta, who is making large collections in Angola for the Lisbon Museum, when we may hope to arrive at a correct knowledge of the avifauna of the country. I have, as usual, referred to Prof. Barboza du Bocage's papers on the consignments of Signor Anchieta, a dagger † being prefixed when the bird is believed to have been recorded from Angola for the first time.

#### 61. CRINIGER FLAVIVENTRIS.

*Criniger flaviventris* (Sm.); Finsch, J. f. O. 1867, p. 22.



M & N Hanhart imp

- 1 . PYCNONOTUS GABONENSIS.
- 2 ..... TRICOLOR.
- 3 ..... BARBATUS.





*Trichophorus flaviventer*, Sm.; Bocage, Journ. Acad. Lisb. ii. p. 43.

One specimen shot by Mr. Monteiro. In size it is bigger than Damara specimens in my collection, the bill being very conspicuously larger and shorter. I fail, however, to detect the slightest difference in coloration.

62. *PYCNONOTUS TRICOLOR*. (Plate VII. fig. 2.)

*Ixus tricolor*, Hartl. Ibis, 1862, p. 341; Bocage, Journ. Acad. Lisb. i. p. 137.

Mr. Hamilton has sent three specimens of this bird, which was originally discovered by Mr. Monteiro in Angola.

I take the present opportunity of making a few observations on the African species of the genus *Pycnonotus*, as their synonymy appears to me to be in a hopeless state of confusion at present; nor am I quite certain that all my own conclusions are satisfactory, notwithstanding that I am working with a very full complement of specimens before me. In their recent work on the birds of Eastern Africa, Drs. Finsch and Hartlaub give a summary of what they consider to be the representatives of the genus *Pycnonotus* in Africa, as follows:—

a. *With white under tail-coverts.*

1. *Pycnonotus obscurus* (Temm.).
2. *P. inornatus* (Fraser).
3. *P. ashanteus* (Bp.).
4. *P. arsinoë* (Licht.).

b. *With yellow under tail-coverts.*

5. *P. nigricans*, with which is associated *P. xanthopygos* (Hempr. et Ehr.).
6. *P. tricolor* (Hartl.).
7. *P. capensis* (Linn.).

In the first of these groups I recognize only two species (*P. obscurus* and *P. arsinoë*); and in the second group I admit five species, as follows:—(1) *P. gabonensis* (sp. n.), (2) *P. xanthopygius*, (3) *P. nigricans*, (4) *P. tricolor*, and (5) *P. capensis*.

In the first place, the authority for *P. ashanteus* is Prince Bonaparte, who states in his diagnosis that it is exactly similar to *P. obscurus* of Algeria, but is smaller. All I can say is that I fail to discover the slightest specific distinction, and measurements will show how little worth are the differences in size.

I am indebted to the kindness of Mr. T. C. Eyton for the loan of Fraser's type specimen of *P. inornatus*; which I find to be certainly the same as *P. obscurus*. It appears to be a young bird, being suffused with brown on the breast, though this is not a specific character, as any one acquainted with the variations in plumage of the *Pycnonoti* will readily admit. The range of *P. obscurus* may be

stated to be Algeria and Western Africa, from Senegambia to Fantee. It has been recorded (s. n. *Ixus ashanteus*) from Angola; but this extended range requires confirmation, for it is perhaps the Gaboon species which supplies the place of *P. obscurus* from Cameroons southward. The *Bulbul* from Gaboon is certainly a distinct species, and may be described as

PYCNONOTUS GABONENSIS, sp. n. (Plate VII. fig. 1.)

*P. similis* *P. barbato*, sed saturatior et crisso albo, flavo clare lavato.

I have no doubt that this is the bird sometimes called *P. ashan-teus* by authors, as distinguished from *P. inornatus*, by reason of the yellow tint on the vent and under tail-coverts; but as yet no name has been assigned to the species, that I can find. It forms a clearly characterized link between the two sections of the genus, being closely allied to *P. barbatus* and *P. tricolor*.

The accompanying illustration (Plate VII.) represents the three species. It will be observed that *P. gabonensis* (fig. 1) is very similar to *P. barbatus* (fig. 3), but is darker in coloration, and has a slight tint of yellow on the under tail-coverts; these latter are entirely bright yellow in *P. tricolor* (fig. 2).

It must be remembered that the *P. nigricans* of Vieillot is founded on the *Brunoir* of Le Vaillant (pl. 106. fig. 1), and this species is represented with a red eyelid. It would therefore be wrong to join *P. xanthopygius*, which has no red eyelid, with *P. nigricans*, even if the clearly defined black cap and paler coloration were not sufficient to separate the first-mentioned bird. The true *P. nigricans* I have in my collection from Damara Land, Transvaal, and Natal; and Mr. Layard has received it from Dr. Exton, from Kanye in Mosilikatze's country. In addition to the red eyelid, *P. nigricans* has a somewhat mottled appearance on the breast, this being produced by the edges of the feathers being much paler than their bases.

*P. tricolor* is a very variable species, changing both with age and with locality, and presenting very different states of plumage in specimens collected at the same place on the same day of the year. Some of my specimens from Damara Land and Angola agree exactly with the type, with which I have compared them, while others from Graham's Town are so brown on the under surface of the body as to approach very near to *P. capensis*. The range of the species (which has been confused with *P. nigricans*) appears to extend from Angola through Damara Land and Natal to Graham's Town.

*P. capensis* is generally to be recognized by its brown tint of plumage, which extends all over the lower surface of the body. Its range is limited, apparently being confined to the Cape Colony. There are two distinct races of the species, a large and a small form, differing in size, as will be seen below.

	Long. tot.	alæ.	tarsi.
1. South Africa ( <i>Layard</i> ) . . . . .	8·2	3·8	0·85
2. South Africa ( <i>Mus. T. C. Eyton</i> ) . .	6·8	3·6	0·8
3. George ( <i>H. Atmore</i> ) . . . . .	6·9	3·55	0·8

## †62. NECTARINIA CHLOROPYGIA.

*Nectarinia chloropygia*, Jard. ; Hartl. Orn. Westafr. p. 47.

A pair sent by Mr. Hamilton.

## †63. NECTARINIA CYANOLÆMA.

*Nectarinia cyanolæma*, Jard. ; Hartl. Orn. Westafr. p. 51.

A pair of this Sunbird are sent by Mr. Hamilton.

## †64. NECTARINIA SUPERBA.

*Nectarinia superba* (Vieill.); Hartl. Orn. Westafr. p. 45.

Two males are in Mr. Hamilton's collection.

## 65. TERPSIPHONE VIRIDIS.

*Tchitreia viridis* (Müll.); Gray, Hand-l. of B. i. p. 332.

*Tchitreia cristata* (Gm.); Bocage, Jorn. Lisb. 1870, p. 343.

One specimen in Mr. Hamilton's collection.

## †66. PLATYSTEIRA LEUCOPYGIALIS.

*Platysteira leucopygialis*, Fras. ; Hartl. Orn. Westafr. p. 95.

One specimen forwarded by Mr. Hamilton.

## †67. NIGRITA CANICAPILLA.

*Nigrita canicapilla*, Strickl. ; Hartl. Orn. Westafr. p. 130.

Mr. Hamilton has sent a single specimen of this bird ; and a careful examination proves conclusively that *N. emiliæ*, of the specific difference of which I had begun to have some doubts, is certainly another species, the characters being correctly given by me in the original description (Ibis, 1869, p. 384).

## †68. HYPOCHERA NIGERRIMA, sp. n.

*H. similis* *H. nitenti*, sed major: omnino nigra: alis et cauda brunneis: margine carpali et hypochondriis albidis: rostro albescenti-rubido: pedibus brunneis. Long. tot. 4·2, alæ 2·6, caudæ 1·4, tarsi 0·6 poll. Angl.

One specimen of this apparently new species of *Hypochera* has been sent by Mr. Hamilton. M. Jules Verreaux agrees with me that it is distinct from *H. nitens*, and approaches more closely his *Vidua hypocherina*, exhibiting an additional proof of the affinities of the two genera *Vidua* and *Hypochera*. Compared with *H. nitens*, the new species is distinguished by its larger size and totally black coloration. *H. nitens* measures as follows:—Long tot. 3·8, alæ 2·35, caudæ 1·35, tarsi 0·5.

## 69. DILOPHUS CARUNCULATUS.

*Dilophus carunculatus* (Gm.) ; Mont. P. Z. S. 1865, p. 93.

Several specimens in Mr. Monteiro's collection obtained by Heer Sala. They were all procured at Galungo in August 1869.

## †70. ACCIPITER MINULLUS.

*Accipiter minullus* (Daud.); Hartl. Orn. Westafr. p. 16.

A specimen marked by Sala female, but which appears to Mr. Gurney and myself to be a young male, from Galungo, Loanda, August 15th, 1869.

## †71. BUCEROS FISTULATOR.

*Buceros fistulator*, Cass.; Hartl. Orn. Westafr. p. 162.

Mr. Hamilton has sent one specimen of this fine Hornbill, which does not seem to have been previously recorded from Angola.

## 72. TROGON NARINA.

*Trogon narina*, Vieill.; Mont. P. Z. S. 1865, p. 92; Bocage, Journ. Lisb. 1868, p. 39.

One female in Mr. Hamilton's collection.

## 73. TURACUS CRISTATUS.

*Turacus giganteus*, V.; Bocage, Journ. Lisb. 1867, p. 142, et 1870, p. 347.

Two specimens are in Mr. Hamilton's collection.

## 74. CORYTHAIX ERYTHROLOPHOS.

*Corythaix erythrolophos* (V.); Bocage, Journ. Lisb. 1867, p. 142, et 1870, p. 346.

*Corythaix paulina* (Temm.); Mont. Ibis, 1862, p. 338.

Two specimens forwarded by Mr. Hamilton.

## †75. MUSOPHAGA ROSSÆ.

*Musophaga rossæ*, Gould; Hartl. Orn. Westafr. p. 160.

Mr. Hamilton has sent one specimen of this bird, the exact habitat of which was previously unknown\*.

## 76. SCHIZORHIS CONCOLOR.

*Schizorhis concolor* (Sm.); Mont. P. Z. S. 1865, p. 91; Bocage, Journ. Acad. Lisb. 1868, pp. 49, 335, et 1870, p. 347.

A male from Galungo on the 9th of August, 1869, and a female from the same place on the 20th of September, both procured by Heer Sala.

## 77. DENDROBATES BRUCII.

*Dendrobates brucii* (Malh.); Bocage, Journ. Acad. Lisb. ii. p. 45.

A female procured by Sala at Galungo on the 28th of September, 1869.

## 78. DENDROBATES NAMAQUUS.

*Dendrobates namaquus* (Licht.); Bocage, Journ. Acad. Lisb. i. p. 336.

\* See *antè*, p. 1.







J. Smith del.

M & N. (Anharb.)

PROMEROPS GURNEYI

A female collected by Sala at Galungo, Loanda, September 28th, 1869.

79. *DENDROBATES CARDINALIS.*

*Picus cardinalis*, Gm. ; Sund. Consp. Av. *Pic.* p. 43.

*Picus flaviscapus*, Ill. ; Hartl. P. Z. S. 1865, p. 26.

*Dendrobates flaviscapus*, Ill. ; Bocage, Journ. Acad. Lisb. i. p. 336.

A female collected by Heer Sala at Galungo, Loanda, on the 18th of August, 1869.

80. *ARDETTA PODICEPS.*

*Ardetta podiceps* (Bp.) ; Hartl. Orn. Westafr. p. 224.

One specimen brought home by Mr. Monteiro.

5. Description d'une Espèce nouvelle de *Promerops*.

Par JULES VERREAUX, C.M.Z.S.

[Received January 10, 1871.]

(Plate VIII.)

*PROMEROPS GURNEYI*, sp. nov. (Plate VIII.)

Diagn. *Similis P. capensi, sed pileo et pectore rufo-castaneis distinguendus.*

Front et vertex roux châtain-clair ; occiput, derrière du cou, manteau, dos et scapulaires d'un brun fortement nuancé de gris, et lanceolé au centre des plumes de flammèches noires plus ou moins larges, plus grandes sur le premier ; de nombreux points blanchâtres terminent les plumes de l'occiput ; le croupion et les sous-caudales olivâtres ; ailes noirâtres, à rémiges frangées extérieurement de gris cendré ; queue d'un gris plombé, avec la partie interne plus fougée, et presque noire ; région parotique un peu plus brune que la partie supérieure du corps ; menton et joues d'un blanc légèrement nuancé de fauve, cou et thorax roux châtain uniforme, devenant de plus en plus blanchâtre sur les ventre, laissant voir de longues flammèches brunes sur les flancs ; région anale jaune, sous-caudales brunes bordées de blanchâtre.

Cette espèce, dont nous possédons depuis plusieurs années deux exemplaires dans notre collection, et à laquelle nous nous faisons un plaisir d'imposer le nom de *Promerops gurneyi*, nous avait été offerte par ce savant ami qui les avait reçus de Mr. Ayres. La bonne fortune qu'a eue notre ami, Mr. Sharpe, d'obtenir pour sa riche collection Africaine un magnifique exemplaire qu'il a bien voulu nous communiquer et nous permettre de décrire, nous ayant confirmé dans notre opinion, nous n'hésitons plus à livrer à la publicité cet oiseau, d'autant plus intéressant, qu'il forme la seconde espèce d'un genre resté si longtemps unique. Les différences principales sont surtout dans la coloration roux châtain qui couvre une partie de la tête, du

cou et du thorax, qui n'existe pas dans l'ancienne espèce dont le peu de roux qui se trouve mélangé au cou et à la poitrine est toujours d'une pâleur qui ne rapproche en rien de la vivacité de celle de notre nouvel oiseau ; et il en est de même pour la teinte grise de la partie supérieure que nous n'avons jamais vue aussi tranchée que dans celui de Natal.

Quoique les trois exemplaires que nous avons vus, n'aient pas la longue queue qui ne paraît qu'à la saison des amours, nous ne doutons pas qu'à cette époque notre oiseau n'en soit aussi pourvu, ce que viendront confirmer les naturalistes qui plus heureux que nous se trouveront à même d'en faire l'observation.

6. Description of *Platasterias*, a new Genus of *Astropectinidae*, from Mexico. By Dr. J. E. GRAY, F.R.S. &c.

[Received January 23, 1871.]

(Plate IX.)

Mr. A. Boucard has lately sent some reptiles and other animals from Tehuantepec in Mexico to the British Museum, among which is a specimen of a Starfish allied to the genus *Astropecten*, belonging to a form which I do not recollect to have been previously noticed, and evidently very different from any that I have ever before seen. It differs from *Astropecten* in being much flatter, more like a deeply divided *Palmipes*, without any marginal tessera and with a single row of marginal spines. It is peculiar in the rays being very broad near the base, and then contracted and separated from each other by deep fissures.

PLATASTERIAS.

Body much depressed, flat, divided into five flat rays, which are broad near the base and gradually tapering to the ends, suddenly narrowed near the body and separated by deep fissures ; the margins of the rays narrow, sharp-edged, with a single series of very close short depressed mobile spines. The dorsal surface covered with close transverse linear series of short papillæ, which are covered at the end with a number of very short spines or *paxillæ*. The under surface with a central longitudinal keel on each side parallel to the ambulacra, with close transverse series of linear ridges, each covered with a series of short close spines ; the ambulacra edged with a series of elongate tapering acute spines, and with a tuft of similar spines at the angles of the mouth between the ambulacra.

PLATASTERIAS LATIRADIATA, sp. nov. (Plate IX.)

Body yellow when dry ; the rays five, flat, twice and a half the length of the diameter of the body, broadly lanceolate. The basal quarter suddenly dilated to its greatest width and then gradually tapering to the end, the greatest width being two-fifths